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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,915	12/09/2003	Matthew L. Cooper	CQ10210	4729
23493	7590	04/19/2007		
SUGHRUE MION, PLLC 401 Castro Street, Ste 220 Mountain View, CA 94041-2007			EXAMINER TIMBLIN, ROBERT M	
			ART UNIT	PAPER NUMBER
			2167	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/19/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/729,915

Applicant(s)

COOPER ET AL.

Examiner

Robert M. Timblin

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-8,10-16,18,20-23 and 25-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-8,10-16,18,20-23 and 25-29 is/are rejected.
- 7) ☒ Claim(s) 3, 9, 19, and 24 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This office action corresponds to application 10/729,915 and applicant's remarks/amendments filed 2/1/2007.

Response to Amendment

Claims 1, 3-16, and 18-29 have been examined and are pending prosecution. Claims 3, 9, 19, and 24 remain objected to for being dependent on a rejected base claim. Claims 2 and 17 have been cancelled at the request of the applicant.

Claim Objections

Claims 3, 4, 19, and 20 recite the limitation "the one pair" in the preamble. There is insufficient antecedent basis for this limitation in the claim.

Specifically, it is unclear which one pair the claims are referring to. It is also unclear if the two different equations are intended to determine the similarity value of the same pair.

Correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 6 and 22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described

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in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

These claims, as amended, recite an equation not defined in the specification (i.e. a Gaussian tapered $(2l+1) \times (2n+1)$ checkerboard kernel).

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 11 has been amended to overcome the previous 35 USC 101 rejection and accordingly the rejection to this claim is withdrawn.

Claim 16 is now accepted under 35 USC 101 as the program instructions are realized to be stored on a storage medium to be executed on a general purpose computer. Accordingly the rejection to this claim is withdrawn.

Claim 26 has been amended to include input and output links supported by figure 18. The input/output links seem to be I/O interface, which could be application program interfaces (or software per se). Furthermore claim 26 includes circuits, routines, or applications. While a circuit is hardware, a "routine or application" is not (i.e. they are software). As claim 26 can still be construed as being software per se, it is accordingly rejected because software in itself is not

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statutory. Further, by claiming software per se, no structure is claimed in the system of claim 26 and its depending claims.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 11, 12, and 16 are rejected under 35 U.S.C. 102(e) as being anticipated over Bellegarda et al. (Bellegarda hereinafter) (U.S. Patent Application 2005/0044487).

With respect to claims 1, 12 and 16, Bellegarda teaches A method for organizing a plurality of data files using wherein at least one meta-data element is associated with each data file, the method comprising

extracting, for at least some selected data files, at least one meta-data element associated with a respective selected data (0025-0049).

organizing the extracted meta-data elements in a desired order' as building a list based on similarity processing performed on descriptive metadata (table 1 of page 4 and Figure 2A-b, and 0047).

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calculating pair-wise differences between values of each of the extracted meta-data elements (0036-0037);

inputting at least one value of a clustering sensitivity parameter (abstract, 0039), said clustering sensitivity parameter defining granularity of the clustering (0044 and table of page 4), and multiplying each pair-wise difference by the clustering sensitivity parameter to obtain a plurality of similarity values for determining clustering based on the similarity values and at a granularity defined by the clustering sensitivity parameter (0027, 0039-0040, and at least reference 303 of figure 3); and

dividing the selected data files into groups based on the similarity values (0025).

This rejection applies equally well to claims 12 and 16 as their claim language are essentially similar.

With respect to claim 11, Bellegarda teaches A method for organizing a plurality of data files stored in a digital memory using meta-data wherein at least one meta-data element that is at least associated with a corresponding one of the plurality data files, the method comprising:

extracting from the memory meta-data elements of the plurality of data files (0025-0049);

Calculating pair-wise difference between values of each of the extracted meta-data elements;

obtaining a desired value of a clustering sensitivity parameter for analyzing the meta data (table 1 of page 4 and Figure 2A-b, and 0047);

multiplying each pair-wise difference by the clustering sensitivity parameter to obtain a plurality of similarity values having granularity defined by the clustering sensitivity parameter (0027, 0039-0040, and at least reference 303 of figure 3);

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determining a structure within the meta-data elements by comparing, for at least a subset of the plurality of data files, the similarity values (figures 2A-B); and
storing the structure of the data files in a memory (0023).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-7, 10, 13, 18, 20-22, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellegarda as applied to claims 1, 11, 12, and 16 above in view of Foote (Foote, "Automatic Audio Segmentation Using a Measure of Audio Novelty", FX Palo Alto Laboratory Inc).

With respect to claims 4 and 20 and similar claim 27, Bellegarda fails to teach determining at least one similarity value as presented in the corresponding calculation.

Foote, however, teaches determining at least one similarity value as presented as the calculation on page 452 where a distance measure is computed to yield a similarity score.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the computation of Foote would have given Bellegarda system a property that can yield a similarity score (452, subsection A). Such a calculation would help Bellegarda further analyze data files.

This rejection applies equally well to claims 20 and 27.

With respect to claims 5 and 18 Bellegarda fails to teach determining, for each of at least some data files, at least one novelty value for that data file based on the at least one similarity value for that data file and for a number of nearby data files.

Foote, however teaches this limitation as finding the novelty measure to detect a novelty value (subsection B 453-454).

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the computation of Foot would have given Bellegarda system the ability to detect novelty value (454) and further to help analyze data files.

With respect to claims 6 and 22 Foote teaches determining at least one novelty value as presented as the calculation on page 454, where novelty $N(i)$ is computed to detect a novelty value. The Gaussian tapered checkerboard kernel can be found within reference to figure 3 on page 453. The motivation for combining Foote to Bellegarda can equally apply well from the rejection of claims 4 and 20 and similar claim 27 above.

With respect to claims 7, 13 and 21 Bellegarda fails to teach determining at least one boundary location between ones of the plurality of data files based on the at least one novelty value determined for at least some of the data files.

Foote, however, teaches determining at least one boundary location between ones of the plurality of data files based on the at least one novelty value determined for at least some of the data files as extracting segment boundaries (subsection C, 454) to estimate boundaries.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because determining at least one boundary location of Foote would have given Bellegarda system a good estimate of boundaries (under *Audio segmentation and indexing* 455).

With respect to claims 10 and 25 Bellegarda fails to teach at least one parameter value that maximizes the confidence value.

Foote, however, teaches at least one parameter value that maximizes the confidence value as the similarity matrix S will have the maximum values (3rd paragraph in subsection A, page 452). The motivation for combining Foote to Bellegarda can equally apply well from the rejection of claims 4 and 20 and similar claim 27 above.

Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellegarda and Foote as applied to claims 4-7, 10, 13, 18, 20-22, and 27 above and further in view of Platt.

With respect to claim 14 Bellegarda teaches determining a similarity value by comparing at least some of the meta-data elements in one cluster of data files to at least some other ones of the meta data elements in that element cluster of data files (0036).

Bellegarda fails to teach determining a dissimilarity value by comparing at least some of the meta-data elements in one cluster of data files to at least some of the meta-data elements in another cluster of data files.

Platt, however, teaches determining a dissimilarity value by comparing at least some of the meta-data elements in one cluster of data files to at least some of the meta-data elements in another cluster of data files (abstract) for finding differing items.

With respect to claim 15, Platt teaches determining a value corresponding to a desired grouping of the clusters of data files based on the differences of the similarity values and the dissimilarity values (col. 5 lines 43-48).

Claims 8, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bellegarda and Foote as set forth in claims 4-7, 10, 13, 18, 20-22, and 27 above and further in view of Schwanke (US 5,485,621).

With respect to claims 8 and 23, the combination of Bellegarda/Foot fails to teach determining a confidence value for that boundary location. Schwanke, however, teaches this limitation (col. 21, lines 43-45) to provide a decision on which groups to combine.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because this teaching of Schwanke would have given the combination of Bellegarda and Foote's system a decision on which groups to combine (abstract, Schwanke).

With respect to claim 26, the limitations of this claim been addressed in the preceding claims set forth above. Accordingly, these claims have been rejected for the same reasons as set forth above by the combination of Bellegarda/Platt and Foote in further view of Schwanke.

Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over the Bellegarda as applied to claims 1, 11, 12, and 16 above in view of Gargi et al. ('Gargi' hereinafter) (U.S. Patent Application 2005/0027712 A1).

With respect to claim 28, Bellegarda fails to teach an exponentially decreasing function of the scalar magnitude of the difference between $t_{sub j}$ and $t_{sub j}$ relative to K .

Gargi, however, teaches this limitation in the formula above [0055] and in respect to a weighting factor [0051] for efficiently organizing data.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teachings of Gargi would have provided to Bellegarda's system aid in developing an organized collection of data ([0009], Gargi).

With respect to claim 29, Bellegarda fails to teach the similarity value of the at least one pair of the selected data files comprises a term depending on an inner product of $v_{sub i}$ and $v_{sub j}$ relative to K , where K is the clustering sensitivity parameter value, $V_{sub i}$ is an actual

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vector value determined from the I data file, and $v_{sub j}$ is an actual vector value determined from the j data file.

Gargi, however, teaches this limitation in the formula below [0053] for efficiently organizing data.

It would have been obvious to one of ordinary skill in the data processing art at the time of the present invention to combine the teachings of the cited references because the teachings of Gargi would have provided to Bellegarda system aid in developing an organized collection of data ([0009], Gargi).

Response to Arguments

Applicant's arguments with respect to claims 1, 11, 16, and 26 have been considered but are moot in view of the new ground(s) of rejection.

As seen in the above rejection, Bellegarda is believed to teach the limitation of a "value of a clustering sensitivity parameter" as claimed.

Claims 4-7, 10, 13-15, 18, 20-22, and 27 argued on page 16 of the Applicant's response remain rejected as the combination of Bellegarda and Foote teaches or at least suggests determining similarity values.

Claims 5 and 18 argued on page 16 of the Applicant's response remain rejected as the combination of Bellegarda and Foote teaches or at least suggests the claimed "novelty value".

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent Application 2003/0110163 by Chen et al. The subject matter disclosed therein pertains to the pending claims (i.e. cluster granularity (e.g. paragraph 0044)).

U.S. Patent 7,027,124 to Foote on 11 April 2006. The subject matter disclosed therein pertains to the pending claims (i.e. Gaussian checkerboard and similarity equations).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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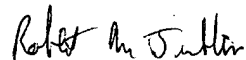
Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert M. Timblin whose telephone number is 571-272-5627. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John R. Cottingham can be reached on 571-272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Robert M. Timblin



Patent Examiner AU 2167

4/4/2007



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